

MICROPARTICLE COATED MEDICAL DEVICE

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Abstract

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A drug-loaded microparticle is applied to a medical device for subsequent application to biological tissues. A method of formulating a drug-loaded microparticle and applying it to the surface of a medical device, such as a stent, is disclosed. The drug-loaded microparticle is formulated by combining a drug with various chemical solutions.

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Specified sizes of the microparticles and amounts of drug(s) contained within the microparticles may be varied by altering the proportions of the chemicals/solutions. In addition to various drugs, therapeutic substances and radioactive isotopes may also be loaded into the microparticles. The drug-loaded microparticle are suspended in a polymer solution forming a polymer matrix. The polymer matrix may be applied to the entire

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surface or only selected portions of the medical device via dipping, spraying or combinations thereof.